

North Boeing Field Source Control Activities

Completed Source Control Activities:

During 2001 through 2006, 89,000 linear feet of joint sealant compounds were removed from concrete panels in the flight line areas and from limited locations within the Propulsion Engineering Lab (PEL) area. 88,000 linear feet of this material was replaced with non-PCB containing caulk for a second time.

During August through October 2006, storm drain lines leading to the lift station from the PEL area were jet-cleaned after the City of Seattle conducted an interim action to remove PCB contaminated soil along the fence line bordering the Georgetown Steam Plant (GTSP).

During June through September 2007, approximately 300 linear feet of storm drain lines near the GTSP were removed and replaced. The former oil water separator retention vault (OWS-186) located adjacent to the GTSP fence line was decommissioned after groundwater was found to be leaking into the vault.

After assessment and video inspection of storm drain lines near the GTSP, 500 linear feet of storm drain lines near the GTSP were cleaned and upgraded with a cured-in-place plastic lining system during November 2007.

During October through December 2007, the main storm drain trunk lines in the PEL area and in the flight line area (north lateral and north central lateral lines) were cleaned utilizing jet-cleaning equipment.

During April 2008, additional main storm drain trunk lines in the north central lateral drainage areas were jet-cleaned. Video inspection of lines indicated the need for storm drain repairs.

During June and July 2008, approximately 950 linear feet of new storm drain lines were installed at the north end of the NBF site to support the flume closure project.

During November and December 2008, approximately 700 linear feet of storm drain piping in the north central lateral line was upgraded to prevent solids from accumulating in the storm drain piping, and to prevent soil from entering the storm drain system. A small portion of this storm drain system was replaced, and the remaining portion was relined with cured-in-place plastic piping. Prior storm drain piping in this area consisted of corrugated metal pipes that could not be sufficiently cleaned and were corroding. Noticeable reductions of PCBs in the north central lateral line was observed after this cleanout and upgrade work.

An evaluation of PCBs in selected catch basin, manhole and oil/water separator structures located throughout the site was performed between May and September 2009. The investigation revealed that elevated PCBs resurfaced at elevated levels in storm drain structures near the GTSP portion of NBF. Testing of surface and subsurface soils in the vicinity of the 3-322 building revealed PCBs in debris, in asphalt and in shallow soils within unpaved areas. A work plan for cleanup of these areas was prepared in accordance with TSCA and MTCA regulations. While waiting for approval of these work plans, the cleanout of selected storm manhole, catch basin and oil/water separator locations was completed based on results from the PCB sampling program.

Source Control Activities in Progress:

During March 2010, the work plan for surface cleaning, soil remediation, and storm drain catch basin cleaning was approved by EPA and Ecology. Implementation of the work plan included pressure cleaning of surface areas around the 3-323, 3-302 and 3-322 buildings to remove residual PCBs from surface debris, removal of TSCA level PCBs in asphalt area along the north side of the 3-322 building, and removal of MTCA level PCBs from underlying soil to the north and west sides of the 3-322 building, and on the west side of the 3-302 building. Soil excavation activities are ongoing, and asphalt pavement is planned as a final action to cover unpaved areas. Catch basin filters were installed in storm drain structures in the vicinity of the 3-302, 3-322, and 3-323 buildings.

During March, 2010, catch basin and manhole locations near the GTSP and near the 3-333 building were assessed to determine the potential for groundwater infiltration into storm drain structures. Twelve locations were identified for sealing utilizing a polyurethane grout that is injected either through penetrations in the storm drain structure, or in surrounding surface areas. The grouting started during the week of March 29th and is expected to continue through April 2010.

During March 2010, a work plan was prepared and submitted to EPA and Ecology, the City and the County for sampling storm drain structures throughout the site and for cleanout of storm drain lines and structures. Sampling began during the week of March 29th and is expected to continue through the end of April. 338 storm drain sampling locations were identified for this sampling work. Samples will be collected in accessible locations where enough storm drain solids are present to collect a sample.

Source Control Activities Planned for NBF:

During April through July 2010, the cleanout of site catch basins, manholes and oil/water separator locations will be performed throughout the NBF Site. Every manhole, catch basin and oil water separator, with the possible exception of retention vault OWS640 will be cleaned of solids.

After completion of the storm drain structure sampling work in April, targeted source area investigations will be performed where needed based on concentrations of PCBs and metals detected in storm drain structures. Investigations may include sampling of

building paint, joint sealant compounds, window caulk, pipe gaskets, electrical equipment, or other potential sources identified within the immediate area. Remedial actions will be performed as needed based on the results of the investigations.

Ecology will be conducting an infiltration and inflow study and expanded sampling program to investigate PCBs and other contaminants within storm drain lines throughout NBF. The infiltration and inflow study will evaluate the potential for groundwater to enter storm drains, and the expanded storm drain sampling program is designed to collect additional data on suspended storm drain solids by filtering those solids as they pass through the storm drain system. The result of the inflow and infiltration study will determine whether additional storm drain systems need to be grout sealed or repaired, and results from the expanded sampling program will determine whether additional investigations or remedial actions need to be performed. This work is expected to continue through the duration of 2010.

A risk assessment will be conducted for remaining PCB containing joint compounds to consider all relevant exposure pathways and to determine if there is a risk to be mitigated. If the risk assessment determines that there is a risk of exposure to human health, or if PCBs are likely to result in an exceedance of the Sediment Quality Standards, then additional joint compound removal or containment work will be performed to mitigate the risk.

A Remedial Investigation and Feasibility Study will be completed to fully characterize site conditions, determine the nature and extent of contamination, assess the risk to human health and the environment, and to evaluate the potential performance and cost of the remedial actions that are to be considered. The FS may include a disproportionate cost analysis if remedial actions are determined to be cost prohibitive relative to the realized benefit.

Storm drain monitoring will continue storm in order to demonstrate that PCB concentrations remain below Sediment Quality Standards and to evaluate other opportunities for source control.

Contingent Source Control Activities:

If suspended solids sampling indicates that the sediment quality standards may be exceeded at the outfall for North Boeing Field, and if there is a risk of sediment recontamination, stormwater treatment devices will be implemented to control PCB concentrations. Other actions to be considered include removal of joint sealant compounds in targeted areas, removal of soil where there is a potential for infiltration into storm drain systems, cleanout and/or replacement of storm drain lines and storm drain structures, and implementing other remedial actions that are identified in the course of the source tracing investigations.